

Appl. No.: 10/005,429  
Filed: December 3, 2001  
Page 10

### REMARKS

Applicants submit concurrently herewith a Response to Restriction Requirement.

Applicants have amended the claims as described herein following the election of the Group IV invention and the further election of two nucleic acid sequences and two corresponding amino acid sequences, namely: (1) SEQ ID NO: 13 and nucleotide sequences encoding SEQ ID NO: 14 and (2) SEQ ID NO: 24 and nucleotide sequences encoding SEQ ID NO: 25. These amendments to the claims were necessitated by the restriction requirement.

Claims 1-61 have been cancelled without prejudice or disclaimer of the subject matter claimed therein. Applicants expressly reserve the right to file continuing applications or take such other appropriate measures deemed necessary to protect the subject matter of the canceled claims.

New claims 62-94 have been added. The Group IV claims, claims 23, 30, 36, 46, and 53, are dependent claims. These claims have been rewritten in independent form. New claims 62, 67, 73, and 80 correspond to claims 23, 30, 46, and 53, respectively. In addition, new dependent claims 63-66, 68-72, 74-79, and 81-86 have been added and correspond to dependent claims 23-26, 30-34, 46-51, 54-56, and 59-61 respectively. Furthermore, non-elected sequences have been omitted from the new claims. Finally, Applicants have added new claims 87-94, which are drawn to transformed plants comprising stably incorporated in their genomes a nucleotide sequence encoding an NADPH-thioredoxin reductase and a nucleotide sequence encoding a thioredoxin *h*.

Applicants respectfully submit that the new claims are directed to the invention of Group IV. Like claim 53, for example, each of new claims 63-94 is directed to a method comprising transforming a plant with a nucleotide sequence encoding an NADPH-thioredoxin reductase and a nucleotide sequence encoding a thioredoxin *h*. Similarly, each of new claims 87-94 is directed to a transformed plant comprising stably in its genome a nucleotide sequence encoding an NADPH-thioredoxin reductase and a nucleotide sequence encoding a thioredoxin *h*. Such plants

Appl. No.: 10/005,429

Filed: December 3, 2001

Page 11

find use in the methods of the Group IV claims, and thus should properly be considered part of the subject matter of Group IV.

Applicants note for the record that, in the Office Action, the characterization of the subject matter of the Group IV claims is not accurate. The Office Action indicates that the Group IV claims (claims 23, 30, 36, 46, and 53) are drawn to a method of altering the disulfide status of storage proteins comprising transforming a plant with two sequences. While Applicants do not disagree that each of the Group IV claims involves two sequences, namely a nucleotide sequence encoding an NADPH-thioredoxin reductase and a nucleotide sequence encoding a thioredoxin *h*, only claims 23 and 53 are directed to a method for altering the disulfide status of storage proteins in a plant. In contrast, claim 30 is directed to a method for improving the digestibility of grain, claim 36 is directed to a method for altering grain hardness, and claim 46 is directed to a method for improving grain for processing.

No new matter has been added by way of amendment of the claims. The new claims are fully supported by claims 12, 14, 16-26, 29-38, 41-56, and 59-61 and the specification. In particular, support for new claim 70 can be found in original claim 32 and in the specification particularly on page 11.

Claims 62-94 are pending.

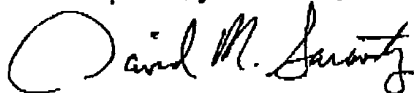
If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

Appl. No.: 10/005,429  
Filed: December 3, 2001  
Page 12

therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

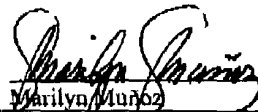


David M. Saravitz  
Registration No. 55,593

Customer No. 29122  
**ALSTON & BIRD LLP**  
Bank of America Plaza  
101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Raleigh Office (919) 862-2200  
Fax Raleigh Office (919) 862-2260

**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that this paper is being facsimile transmitted to Examiner Stuart F. Baum, at the US Patent and Trademark Office at facsimile number (703) 872-9306 on the date shown below.

  
Marilyn Muñoz

April 19, 2004  
Date